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**A4A ATB**  
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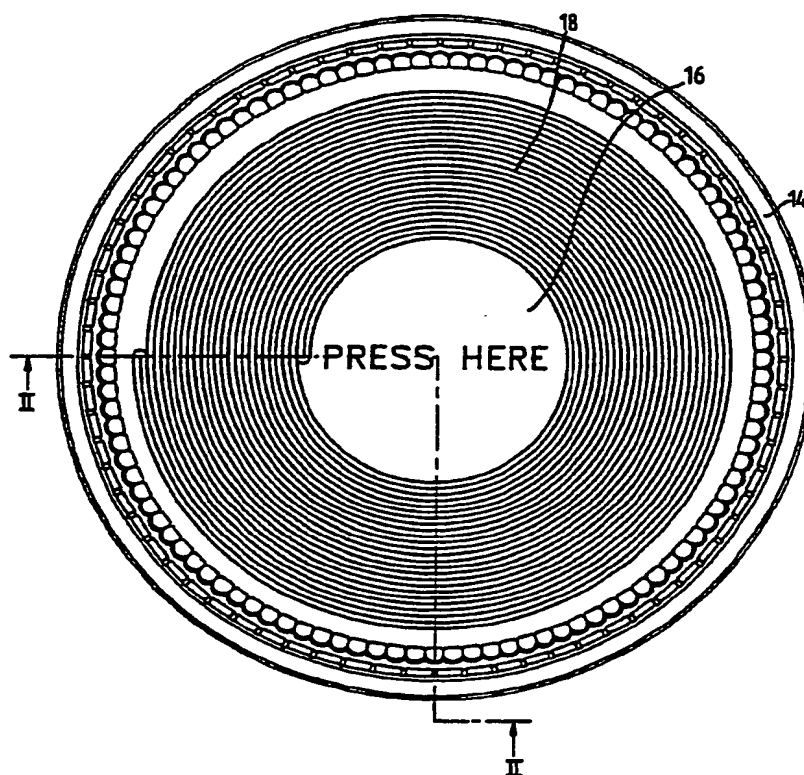
(56) Documents Cited  
**GB 2215587 A GB 1251432 A GB 1248298 A**  
**GB 1127952 A US 4184421 A**

(58) Field of Search  
UK CL (Edition M ) **A4A ATB ATX AWA , B8P PG4**  
INT CL<sup>5</sup> **A21B 3/13 5/00**

(54) **Container having a displaceable base**

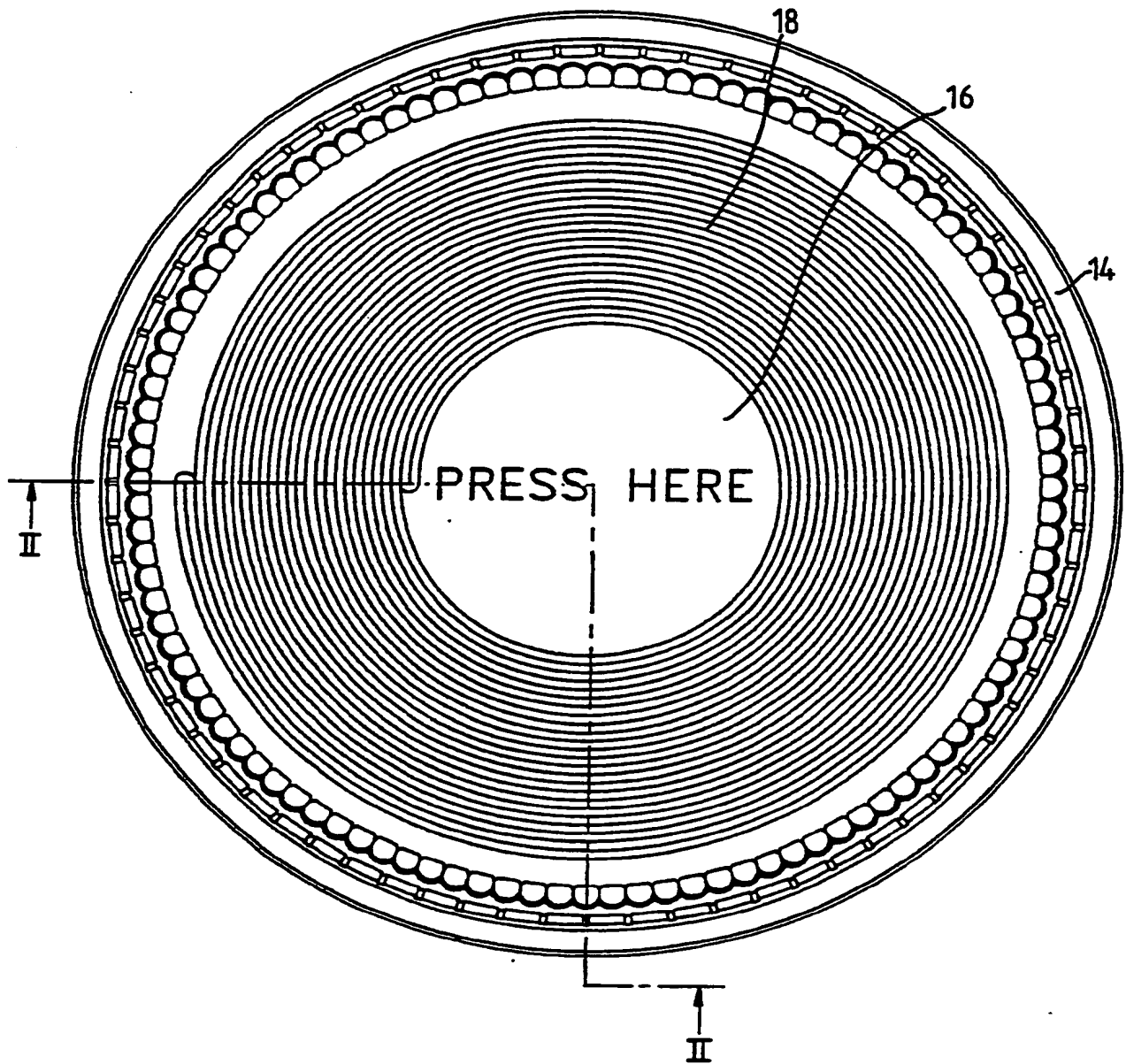
(57) A disposable open-topped container, for example of plastics, for eg cakes or pies has a bottom formed with annular corrugations, or a spiral corrugation comprise a plurality of turns, in an annular region 18 surrounding a central generally flat area 16. These corrugations allow the region 16 of the bottom of the container to be pushed upwardly relative to the remainder, for easy ejection of eg the cake or pie from the container.

*Fig.1.*

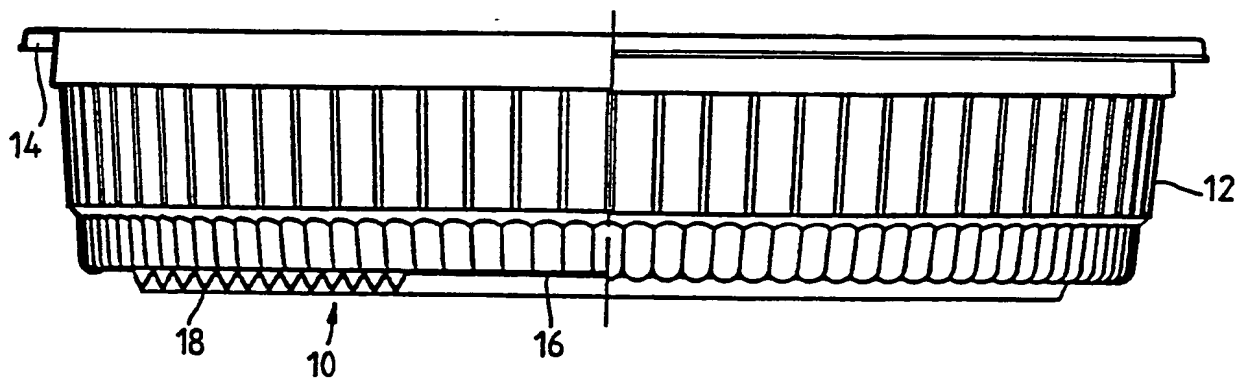


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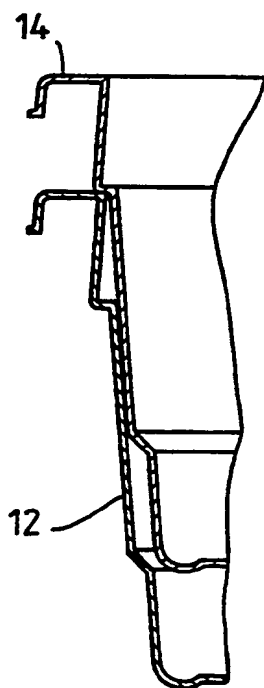
*Fig.1.*



*Fig. 2.*



*Fig. 3.*



## DESCRIPTION OF INVENTION

Title: "Container"

THIS INVENTION relates to containers for solid products, for example to dish-like containers for solid food products such as cakes or pies.

It is common practice for solid food products such as cakes or pies to be retailed in packaging which includes a disposable dish, for example of plastics, paper or card, having a side wall which closely surrounds the edge of the cake or pie. However, it is frequently difficult to remove the food product from such packaging without breaking the edge of the cake or pie or otherwise spoiling the appearance of the product for serving purposes. It will be appreciated that generally, with food products of this type, the peripheral and lower surfaces of the product are generally adhered to a greater or lesser degree to the container so that the principal difficulty lies in initially freeing the product from the container. It is among the objects of the present invention to provide an improved container which affords a solution to the above-noted problem.

According to one aspect of the invention there is provided an open topped container having a bottom at least part of which is displaceable manually towards the open top for ejection of a solid product from the container.

Preferably said bottom includes an area surrounded by a corrugation or corrugations to facilitate deformation of said area of the bottom, relative to the remainder of the container, towards the open top.

An embodiment of the invention is described below by way of example with reference to the accompanying drawings in which:-

FIGURE 1 is a plan view of a container embodying the invention;

FIGURE 2 is a view, partly in side elevation and partly in section along the line II-II of Figure 1, and

FIGURE 3 is a fragmentary view in vertical section illustrating stacking of a plurality of the containers.

The container shown in the drawings is in the form of a shallow dish, for example, for a pizza or pie, cheesecake, flan or the like food product and is intended as a disposable container for such product, forming part of packaging in which the container is retailed, for example. The container illustrated is formed of relatively stiff resilient plastics sheet material and may be vacuum-formed or press-formed. The container shown is circular in plan, comprising a generally flat base 10 with an upstanding peripheral wall 12 terminating in an outwardly turned flange or lip 14. For purposes of decoration and rigidity, the peripheral wall is provided with a pattern of flutes and corrugations which form no part of the present invention.

The bottom 10 comprises a flat, generally circular, central area 16 and, encircling the central area 16, an annular region 18 extending into close proximity to the peripheral wall 12 and which incorporates a set of concentric annular corrugations, or, alternatively, and as shown, a single spiral corrugation producing substantially the same effect. As illustrated in Figure 2, the form of

the corrugation or corrugations may be such that, in vertical section through the bottom of the container, the corrugations define a regular, symmetrical repeating sawtooth form with, as shown, the peaks of the sawteeth lying in the plane of the central portion 16 and the troughs lying in a parallel plane slightly below that of the portion 16.

The spiral or concentric corrugations surrounding the central area 16 make it possible for a substantial controlled vertical (as viewed in Figure 2) displacement of the central area 16 to take place, somewhat after the fashion of a circular bellows, relative to the peripheral wall 12 of the container. Where the container holds a food item such as a cake or pie, (in which at least the casing is solid as opposed to liquid), and which, for example, extends radially outwardly into contact with the peripheral wall 12 of the container and is of a depth equal to or slightly less than that of the container, it is possible readily to extract the food product from the container in the following fashion. Holding the container in two hands, at diametrically opposite sides of the container, with the thumbs engaging the flange 14 and the fingers extending underneath the container into the central area 16, the central area 16 is simply pressed upwardly with the fingertips, relative to the flange 14, so that the food product is displaced, as a whole, from the dish.

It will be appreciated that the container need not be circular in plan but may be, for example, square or oblong. Likewise, the corrugations formed in the bottom need not be circular or quasi-circular but may, for example, extend around a rectangular path or a rectangular/spiral path.

Whilst the container described is a "disposable" container of moulded plastics material, it will be appreciated that a similarly configured container may be formed from other materials, such as paper, cardboard, metal foil, etc. In principle, a similarly configured container might be formed in sheet metal, for repeated use as a baking tin for cakes or pies, for example.

As shown in Figure 3, the side wall of the container is configured to allow it to be stacked vertically with a plurality of identical containers, ready for filling or for handling by processing machinery etc.

## CLAIMS

1. An open topped container having a bottom at least part of which is displaceable manually towards the open top for ejection of a solid product from the container.
2. A container according to claim 1 wherein said bottom includes an area surrounded by a corrugation or corrugations to facilitate deformation of said area of the bottom, relative to the remainder of the container, towards the open top.
3. A container according to claim 2 wherein said area is surrounded by a spiral corrugation which makes several circuits around said area of the bottom.
4. A container according to claim 2 wherein said area is surrounded by a plurality of concentric corrugations.
5. A container substantially as hereinbefore described with reference to and as shown in the accompanying drawings.
6. Any novel feature or combination of features described herein.



**Patents Act 1977****Examiner's report to the Comptroller under Section 17  
(The Search report)**Application number  
GB 9310118.6**Relevant Technical Fields**

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(ii) Int Cl (Ed.5) A21B 3/13, 5/00

Search Examiner  
DR C L DAVIESDate of completion of Search  
26 JUNE 1994**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Documents considered relevant  
following a search in respect of  
Claims :-  
1-5**Categories of documents**

- X:** Document indicating lack of novelty or of inventive step.      **P:** Document published on or after the declared priority date but before the filing date of the present application.
- Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.      **E:** Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A:** Document indicating technological background and/or state of the art.      **&:** Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages		Relevant to claim(s)
X	GB 2215587 A	(PARSONS) see Figure 1 and Claim 1	1
X	GB 1251432	(MONSANTO) see whole document	1-5
X	GB 1248298	(MacMANUS) see Figures and page 1 lines 54-55	1
X	GB 1127952	(GRAHAM) see Figures	1
X	US 4184421	(AHLGREN) see Figure 1	1

**Databases:** The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).